

to the laser driver in response to control signals, the plurality of increment currents including a first increment current supplied to the laser driver during an automatic power control process and a second increment current supplied to the laser driver during a special power setting process.” JP ‘631 does not teach or suggest these limitations.

To the contrary, JP ‘631 teaches an optical recording/reproducing apparatus in which three separate signals, Ir, Ie, and Ip (Fig. 1) are generated from Ir current source 8, Ie current source 7, and Ip current source 7. In JP ‘631, the current sources Ir, Ie, and Ip are supplied directly to the laser diode 1. Jp ‘631 does not teach a semiconductor laser driver supplying a selected one of a plurality of drive currents to a semiconductor laser and a current driver selectively outputting one of a plurality of increment currents to the laser driver, as recited in claim 1.

Furthermore, JP ‘631 does not teach that the current driver outputs a plurality of increment currents that includes a first increment current supplied to the laser driver during an automatic power control process, and a second increment current supplied to the laser driver during a special power setting process, as recited in claim 1. There is no disclosure in JP ‘631 of an automatic power control process or of a special power setting process.

The Office Action characterizes applicant’s description of JP ‘631 in the application specification as supplying all of the recited features of claim 1, except a “special power setting process.” Applicant does not acknowledge, however, that JP ‘631 teaches or suggests that “such a system provides for a laser power control system in this environment with respect to the bottom-level drive as it relates to both the peak

power and the erase power.” Applicant objects to the Office Action’s characterization of Applicant’s description of JP ‘631.

The Office Action admits at page 6, line 25 that in the corresponding U.S. patent, Shigemori, there is “no clear depiction of an apc capability.” Moreover, the rejection of claim 1 is not supported by the machine-generated translation of JP ‘631. The Office Action’s argument concerning paragraph 8 of the machine-generated translation is not understood. In addition, please note that the quality of the machine-generated translation is so poor that it does not satisfy the translation requirement of M.P.E.P. § 706.02(II), and these are additional reasons why the rejection should be withdrawn.

Nor are Noda or JP ‘576 cited for these limitations. Noda discloses automatic current-control (ACC) circuits for high-speed digital optical communications. Noda is not in the same “environment” as JP ‘631 and applicant’s optical recording/reproducing apparatus. Moreover, the ACC circuits of Noda keep the drive current to the communications laser constant at a set current value. Noda does not teach or suggest recited features missing from the optical recording/reproducing apparatus of JP ‘631 such as a current driver that selectively outputs one of a plurality of increment currents to the laser driver in response to control signals. Thus, Noda does not remedy the above-discussed deficiencies of JP ‘631.

JP ‘576 does not remedy the deficiencies of JP ‘631 and Noda. JP ‘576 (English abstract) discloses a system that searches iteratively for an appropriate D/A converter 4 output voltage. The system includes an MPU 5 that controls output of laser diode 1 based on the output of A/D converter 4. MPU 5 controls the output voltage of D/A

converter 9, which output voltage controls the current supplied by current source 10 to laser diode 1. JP '576 does not teach or suggest a current driver selectively outputting one of a plurality of increment currents to the laser driver in response to control signals, which feature also is missing from the disclosures of JP '631 and Noda. Thus, JP '576 does not remedy the above-discussed deficiencies of JP '631 and Noda.

Claim 1 is further rejected under 35 U.S.C. § 103 as being unpatentable over Shigemori in view of Miyagawa, and further in view of JP '576. Reconsideration is respectfully requested. The rejection should be withdrawn because Shigemori is not available as a prior art reference under 35 U.S.C. § 103. The present application was filed on May 9, 2001. Shigemori has a U.S. filing date of December 16, 1998, and was granted on June 4, 2002. Shigemori qualifies as prior art only under 35 U.S.C. § 102(e), and the subject matter of Shigemori and of the claimed invention were, at the time the invention was made, subject to an obligation of assignment to the same entity: Ricoh Company, Ltd. The respective assignments are recorded at Reel 9758, Frame 0732, and Reel 012135, Frame 0531. Therefore, 35 U.S.C. § 103(c) is applicable to the present situation, and the rejection should be withdrawn. See M.P.E.P. § 706.02(l)(1).

Claim 1 is further rejected under 35 U.S.C. § 103 as being unpatentable over Miyagawa in view of JP '576. Reconsideration is respectfully requested. Miyagawa is not available as a prior art reference, and therefore the rejection should be withdrawn. Miyagawa's national stage completion date (December 5, 2001) is subsequent to the U.S. filing date of the present application, and presumably the PCT application was not published in English. See M.P.E.P. § 706.02(i).


Claims 2-6 and 8-15 depend from claim 1 and should be allowable along with claim 1 and for other reasons.

The allowance of dependent claim 7 is gratefully acknowledged.

Allowance of the application with claims 1-15 is solicited.

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